<u>REMARKS/ARGUMENTS</u>

Favorable reconsideration of this application as currently amended and in light of the

following discussion is respectfully requested.

Claims 1-29 are currently pending. The present Amendment amends Claims 1, 4, and

8-10; and adds Claims 14-29. The changes and additions to the claims are supported by the

originally filed application. No new matter has been added.

In the outstanding Office Action, Claims 8 and 9 were objected to because of

informalities; Claims 1-6 and 10-12 were rejected under 35 U.S.C. § 102(b) as being

anticipated by <u>Schwinghammer et al.</u> (U.S. Patent No. 5,953,661, herein "<u>Schwinghammer</u>");

and Claims 1, 4, 7-10, and 13 were rejected under 35 U.S.C. § 102(b) as being anticipated by

<u>Neubauer et al.</u> ("Required Network Size for System Simulations in UMTS FDD Uplink,"

herein "<u>Neubauer</u>").

Applicant respectfully requests reconsideration of the objection to Claims 8 and 9

which have been amended to recite operations corresponding to the features of Claims 4 and

7 and to delete the dependency from Claim 7. Therefore, since amended Claims 8 and 9 do

not refer back to an apparatus claims, Applicant respectfully requests that the objection to

Claims 8 and 9 be withdrawn.

Applicant respectfully traverses and requests reconsideration of the rejection of

Claims 1-6 and 10-12 under 35 U.S.C. § 102(b) for the reasons set forth below.

Independent Claim 1 is directed to a method of *simulating* operating conditions of a

telecommunication system including a plurality of radio base stations and a plurality of

mobile transceivers, including: (1) computing at least one value of at least one interference

parameter of one of the mobile transceivers, the at least one interference parameter being

indicative of an amount of interference affecting a communication between the mobile

transceiver and an associated radio base station; (2) identifying radio base stations and mobile

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transceivers that generate an amount of interference attaining a predetermined level of significance and affecting the communication; and (3) selecting data of radio base stations and mobile transceivers identified during the identification step for an execution of the computing step. Independent Claims 4 and 10 recite similar features except that Claim 4 uses means-plus-function language and Claim 10 is directed to a simulating device.

The Office Action asserts at page 2 that Schwinghammer teaches all the features of independent Claims 1, 4, and 10 based on column 3, line 60 – column 4, line 60 and column 6, line 49 – column 7, line 24 of Schwinghammer. Applicant respectfully disagrees.

Schwinghammer is directed to "a system and method for *operating* a cellular communication system"[1] and pertains to "the field of cellular communications systems and methods of operating the same."[2] Schwinghammer does not teach or suggest any *simulation* method, system, or apparatus or anything related thereto. A person of ordinary skill in the art would understand that operating an actual communication system and simulating a communication system are different types of activities using distinct methods and facing different problems. For example, when operating an actual communication system, the system parameters are already known by design or simply measured, i.e., a device measures the actual value of any parameter of interest. However, when simulating a communication system, one may not measure the actual parameters, but rather computes simulated parameters using models which run on computers and thus lead to considerable challenges in processing and storage not encountered when operating a given system. For instance, the specification mentions that "a computation of interference parameters such as the signal-to-noise ratios described above will require a huge amount of computing power, since the 3G telecommunication systems to be realistically simulated will typically involve thousands of

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[1] Schwinghammer, abstract.
[2] Schwinghammer, column 1, lines 6-8.

radio base stations and hundred of thousands of mobile receivers."[3] Moreover, The

specification mentions with respect to methods of simulation that "[s]uch methods are

currently used for optimizing, *before actual physical implementation of a*

telecommunication system, a deployment of radio base stations forming a network in the

system and a design of a decision-making network infrastructure to manage the network in

order to define a telecommunication system that provides optimal communication services at

the lowest possible cost."[4] Therefore, it is respectfully submitted that <u>Schwinghammer</u> is not

related art since it is concerned with a method of operating an existing system and does not

teach or suggest any *simulation* of a telecommunication system.

Applicant notes that M.P.E.P. § 2143.03 states that "[a]ll words in a claim must be

considered in judging the patentability of that claim against the prior art." Therefore, since

<u>Schwinghammer</u> does not teach any method of *simulating* operating conditions of a

telecommunication networks, but only a method of actually operating an actual

communications system, Applicant respectfully submits that <u>Schwinghammer</u> does not teach

or suggest "simulating operating conditions of a telecommunication system" as recited in

independent Claims 1, 4, and 10. Further, none of the elements of <u>Schwinghammer</u> found in

the cited passages correspond to the features of independent Claims 1, 4, and 10 used in

simulating operating conditions since the elements of <u>Schwinghammer</u> are actual

measurements of an existing system, not simulations.

Therefore, <u>Schwinghammer</u> fails to teach or suggest every feature recited in

Applicant's independent Claims 1, 4, and 10, so that Claims 1-6 and 10-12 are patentably

distinct over <u>Schwinghammer</u>. Accordingly, Applicant respectfully traverses, and requests

reconsideration of, the rejection based on <u>Schwinghammer</u>.[5]

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[3] <u>Applicant's specification</u>, page 3, lines 10-13.
[4] <u>Applicant's specification</u>, page 1, lines 14-18.
[5] See M.P.E.P. 2131: "A claim is anticipated <u>only if each and every</u> element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference," (Citations omitted) (emphasis added).

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Applicant respectfully traverses and requests reconsideration of the rejection of

Claims 1, 4, 7-10, and 13 under 35 U.S.C. § 102(b) for the reasons set forth below.

The Office Action asserts at pages 3 and 4 that <u>Neubauer</u> teaches all the features of

independent Claims 1, 4, and 10 (and Claims 8 and 9, now rewritten in independent form)

based on page 482, paragraph a) – page 483, paragraph d) of <u>Neubauer</u>. Applicant

respectfully disagrees.

<u>Neubauer</u> is directed to an investigation of the minimum network size for system

simulations. However, <u>Neubauer</u> does not teach or suggest all the features of independent

Claims 1, 4, and 8-10. Paragraph a) of <u>Neubauer</u> describes the modeling of a channel model

according to path loss models for UMTS system simulations and states that "[t]he

interference caused by mobiles controlled by the same BS as the investigated UE (Intra-cell

interference), and mobiles controlled by other BSs (Inter-cell interference), are calculated

separately." However, this does not teach or suggest "identifying radio base stations and

mobile transceivers that generate an amount of interference attaining a predetermined level of

significance and affecting said communication" and "selecting data of radio base stations and

mobile transceivers identified during the identification step for an execution of the computing

step" as recited in independent Claim 1 (and similarly recited in independent Claims 4 and 8-

10). As cited above, <u>Neubauer</u> aims to determine the minimum network size for system

simulations. As such, a person of ordinary skill in the art would understand that interferences

are calculated in <u>Neubauer</u> to assess whether the network size can be reduced further without

compromising the reliability of the simulations, but would not see any reason for "identifying

radio base stations and mobile transceivers that generate an amount of interference attaining a

predetermined level of significance and affecting said communication" and "selecting data of

radio base stations and mobile transceivers identified during the identification step for an

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See also M.P.E.P. 2143.03: "All words in a claim must be considered in judging the patentability of that claim
against the prior art."

execution of the computing step." That is, Neubauer does not attempt to reduce the number of radio base stations and mobile transceivers in the simulations, to reduce a computational burden, by "identifying radio base stations and mobile transceivers that generate an amount of interference attaining a predetermined level of significance and affecting said communication" and "selecting data of radio base stations and mobile transceivers identified during the identification step for an execution of the computing step." Rather, Neubauer keeps all the interference data but attempts to reduce the computational burden by reducing the network size. To that effect, Neubauer found that using a 7-site simulation, rather than a 19-site simulation, requires only 1/8 of the simulation time, but underestimates interference by several dB.[6] This further shows, since proper estimation of the interference in Neubauer is used to assess whether the number of sites can be further reduced, that no identification or selection of base stations or transceivers generating an amount of interference attaining a predetermined level of significance is suggested, or would make sense, in Neubauer. Paragraph b) of Neubauer merely mentions parameters and does not relate to the claimed features. Paragraph c) of Neubauer discusses the network configurations and does not relate to the claimed features. Paragraph d) of Neubauer asserts that mobility is not directly included and does not relate to the claimed features.

Therefore, Neubauer fails to teach or suggest every feature recited in Applicant's independent Claims 1, 4, and 8-10, so that Claims 1, 4, 7-10, and 13 are patentably distinct over Neubauer. Accordingly, Applicant respectfully traverses, and requests reconsideration of, the rejection based on Neubauer.

Further, in order to vary the scope of protection recited in the claims, new Claims 14-29 are added. Claims 14, 15, 19, and 20 find non-limiting support in the disclosure as originally filed, for example at page 4, lines 7-15. Claims 16-19 and 21-23 find non-limiting
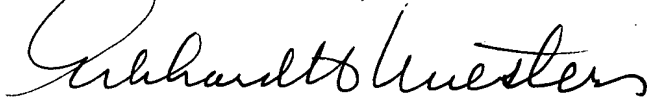
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[6] Neubauer, abstract.

support in the disclosure as originally filed, for example at page 4, lines 22-31. Claims 24-29 and 21-23 find non-limiting support in the disclosure as originally filed, for example at page 8, lines 1-16. Therefore, the changes to the claims are not believed to raise a question of new matter.[7] Further, the cited references do not teach or suggest the features of Claims 14-29 which are thus believed to be allowable.

Consequently, in view of the present amendment, no further issues are believed to be outstanding in the present application, and the present application is believed to be in condition for formal Allowance. A Notice of Allowance for Claims 1-29 is earnestly solicited.

Should the Examiner deem that any further action is necessary to place this application in even better form for allowance, the Examiner is encouraged to contact Applicant's undersigned representative at the below listed telephone number.

Respectfully submitted,

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[7] See M.P.E.P. 2163.06 stating that "information contained in any one of the specification, claims or drawings of the application as filed may be added to any other part of the application without introducing new matter."